BirdLife International (2004) currently lists the conservation status of *Clytoctantes atrogularis* as Critical. For the present, however, I suggest that the species be reverted to its prior conservation status of Data Deficient (Stattersfield *et al.* 1998). Despite ongoing deforestation in the southern part of the range, *C. atrogularis* may actually benefit somewhat from the opening of forested areas.

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References:

BirdLife International. 2004. Threatened birds of the world 2004. CD-ROM. BirdLife International, Cambridge, UK.

Fearnside, P. M. in press. Brazil's Samuel Dam: lessons for hydroelectric development policy and the environment in Amazonia. *Environ. Management*.

Isler, P. R. & Whitney, B. M. 2002. Songs of the antibirds. 3 CDs. Cornell Lab. of Orn., Ithaca, NY.

Lanyon, S. M., Stotz, D. F. & Willard, D. E. 1990. Clytoctantes atrogularis, a new species of antbird from western Brazil. Wilson Bull. 102: 571–580.

Stattersfield, A. J., Crosby, M. J., Long, A. J. & Wege, D. C. 1998. *Endemic Bird Areas of the world:* priorities for biodiversity conservation. BirdLife International, Cambridge, UK.

Zimmer, K. J. & Isler, M. L. 2003. Family Thamnophilidae (typical antbirds). Pp. 448–681 in del Hoyo, J., Elliott, A. & Christie, D. A. (eds.) Handbook of the birds of the world, vol. 8. Lynx Edicions, Barcelona.

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The nest, eggs and incubation behaviour of Sickle-winged Guan Chamaepetes goudotii fagani in western Ecuador

by Harold F. Greeney
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Sickle-winged Guan *Chamaepetes goudotii* ranges from Colombia to Peru and northern Bolivia (del Hoyo *et al.* 1994). In Ecuador there are two subspecies, *tschudii* in the east and *fagani* in the west (Delacour & Amadon 1973, Ridgely & Greenfield 2001). Ridgely & Greenfield (2001), however, noted the possibility that *fagani* deserves species rank.

Though Delacour & Amadon (1973) described Sickle-winged Guan as feeding 'much on the ground' and commonly descending from trees, my own experience in

both eastern and western Ecuador, and those of other authors, is that it is primarily arboreal, often being seen foraging in small groups at dusk and dawn (Hilty & Brown 1986, Ridgely & Greenfield 2001). However, I have seen the species descend to the ground to drink from standing water along roadsides in the early morning and late evening.

In Colombia, Hilty & Brown (1986) reported birds in breeding condition and females with single, dependent young in June. Sclater & Salvin (1879) described the egg as white and finely pitted, but nothing has been reported on the incubation behaviour or, apparently, the nest. Here I describe the nest, eggs and incubation rhythms, from dawn to dusk, at a nest of *C. goudotii fagani* in western Ecuador over the course of four days.

Methods

All observations were made on 20–23 August 2003 at the Mindo Biological Station (00°04'S, 78°43'W) in the Mindo Valley of north-west Ecuador. The station is at 1,600 m with the area immediately around the station and nest site consisting of heavily disturbed forest and pasture in a small, 30-ha valley surrounded by primary cloud forest. Terrain is typically rugged for this elevation in the Andes, with vegetation characterised by high epiphyte density and a canopy height of 25–35 m.

The nest was found incidentally during casually walked transects to observe birds, whilst visiting the biological station on 19–24 August 2003. Eggs were measured using metallic field callipers sensitive to the nearest 0.1 mm.

Results

On 20 August 2003, at 0645 h, an adult Sickle-winged Guan was flushed from its nest, which contained two dull white eggs. The eggs were heavily stained with dark red-brown smears of what was possibly blood and fluid from the female. They measured 74.4 mm by 50.0 mm and 70.2 mm by 51.2 mm respectively. The nest was situated 2.3 m above ground, atop a clump of large bromeliads (*Guzmania* sp.). The eggs were in the bottom of a shallow depression formed by the leaves of 2–3 bromeliads, measuring c.20–25 cm in diameter and lined with dead leaves and small sticks. It is difficult to be sure if these materials collected there naturally or were brought by the adults. The supporting tree was c.30 cm in diameter at breast height and c.15 m high. A 3-m-wide road passed immediately adjacent to the nest on one side, and terrain on the other sloped into dense, tangled second growth. Adults flushed from the nest when observers were c.6–10 m away and flew immediately into the dense vegetation, hopping from perch to perch making the high-pitched alarm call (*keeeeeee-uk!*) described by Hilty & Brown (1986). After a few minutes they would quietly leave the area.

On 20 August a video camera was placed on a tripod 4 m from the nest. Unfortunately, the nest location was such that tapes could not be changed without flushing the adult from the nest. The nest was filmed from 0915 h to 1715 h on 20

August and from 0545 h to 1815 h on the three subsequent days. I was unable to determine if both sexes incubated. Generally, the adult on the nest sat very still, occasionally peering about with jerky movements of the head. Periodically it would stand and lower its head into the nest, gently drawing its head backwards, which was likely a turning of the eggs. During these brief periods while it was standing, the adult would also occasionally peck sharply into the nest or arrange a stick briefly. On several occasions, while its head was out of sight in the nest, the adults' whole body was seen to vibrate. I interpret this behaviour as the 'tremble thrusting' or 'rapid probing' described by previous authors (Dobbs *et al.* 2003, Haftorn 1994, Greeney 2004), which is likely a method of parasite removal or possibly egg turning.

On 20 August, after being flushed while the camera was set up at 0915 h, an adult did not return to the nest until 1415 h. This adult remained on the nest for three hours until the camera was taken down. During the subsequent three days of filming, I could discern no apparent pattern in the rhythm of adult attendance. The first break off the nest (off-bout hereafter) occurred around 0600 h, and the final sitting on the nest (on-bout hereafter) for the night was initiated between 1710 h and 1810 h. Only four complete on-bouts and four complete off-bouts were recorded. Complete on-bouts averaged (\pm SD) 86.1 ± 73.4 minutes and complete off-bouts averaged 87.5 ± 121.0 minutes. Otherwise, including on and off-bouts interrupted or initiated by tape changes, on-bouts averages per day ranged from 79.6 ± 47.3 minutes on 21 August to 133.3 ± 34.9 minutes on 22 August. Average off-bouts for the day ranged from 78.5 ± 81.1 minutes on 22 August to 107.6 ± 110.9 minutes on 21 August. Total coverage of the eggs from 0600 h to 1800 h was 34.1%, 40.2%, 56.4% and 49.9% for each of the days. The longest off-bout was on 20 August for 310 minutes, but each day included a period of at least 189 minutes.

Discussion

Whilst the changing of cassettes (three times per day) flushed the incubating adult, and this effected the observed numbers, the overall pattern of incubation was so arhythmic that it is hard to ascertain the effect, if any, on natural incubation rhythms. It is more likely that the eggs had been recently laid and regular rhythms had not yet commenced. The eggs observed here are of similar size to those measured by Sclater & Salvin (1879) from central Colombia, presumably of the subspecies *goudotii* following distributions given by Delacour & Amadon (1973). Notwithstanding having worked at an east Ecuadorian Andes site for over four years, I have not yet encountered a nest of the Sickle-winged Guan (*tschudii*), despite the species' abundance there. This suggests that the nest studied here may be abnormally low or may reflect natural history differences between the two subspecies. I encourage others to report observations that would further elucidate reasons for this possible difference.

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References:

Delacour, J. & Amadon, D. 1973. *Curassows and related birds*. Amer. Mus. Nat. Hist., New York. del Hoyo, J., Elliott, A. & Sargatal, J. (eds.). 1994. *Handbook of the birds of the world*, vol. 2. Lynx

del Hoyo, J., Elliott, A. & Sargatal, J. (eds.). 1994. *Handbook of the birds of the world*, vol. 2. Lyny Edicions, Barcelona.

Dobbs, R. C., Martin, P. R., Batista, C., Montag, H. & Greeney, H. F. 2003. Notes on egg-laying, incubation, and nestling care in the Scaled Antpitta *Grallaria guatimalensis*. *Cotinga* 19: 65–70.

Greeney, H. F. 2004. Breeding behavior of the Bicolored Antvireo (*Dysithamnus occidentalis*). *Orn. Neotrop.* 15: 349–356.

Haftorn, S. 1994. The act of tremble-thrusting in tit nests, performance and possible functions. *Fauna Norv. Ser. C. Cinclus* 17: 55–74.

Hilty, S. L. & Brown, W. L. 1986. A guide to the birds of Colombia. Princeton Univ. Press.

Ridgely, R. S. & Greenfield, P. J. 2001. The birds of Ecuador. Cornell Univ. Press, Ithaca, NY.

Sclater, P. L. & Salvin, O. 1879. On the birds collected by the late Mr. T. K. Salmon in the state of Antioquia, United States of Colombia. Proc. Zool. Soc. Lond. 1879: 486–550.

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The types of nightjars (Caprimulgidae) described by Sir Andrew Smith in the *Illustrations of the zoology of South Africa*

by Nigel Cleere

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Some of the earliest and most important explorations of the avifauna of southern Africa were undertaken by Dr (later Sir) Andrew Smith's expeditions between 1828 and 1829, 1832 and between 1834 and 1836 (Kirby 1965). Most of the new birds discovered during the latter expedition were described in a report to subscribers, although no nightjars were included (Smith 1836), and many of Smith's specimens were later sold at auction in London (Salvin 1880). Unfortunately, records of the dispersal of Smith's specimens were destroyed during the Second World War (Kirby 1965).